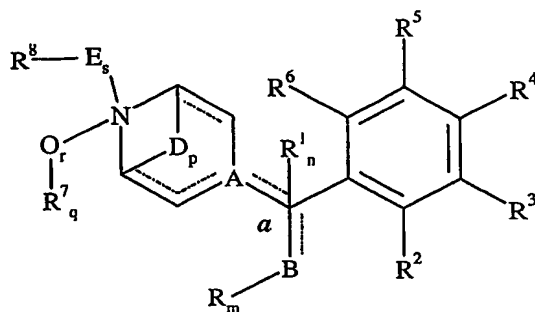


What is claimed is:

Claim 1. A compound of formula I



I

wherein;

m, n, q, r, and s are independently selected from 0 or 1; and p is 0, 1, 2, or 3;

A is selected from C and CH, forming a six-membered azine ring selected from piperidine, 1,4-dihydropyridine, and 1,2,5,6-tetrahydropyridine;

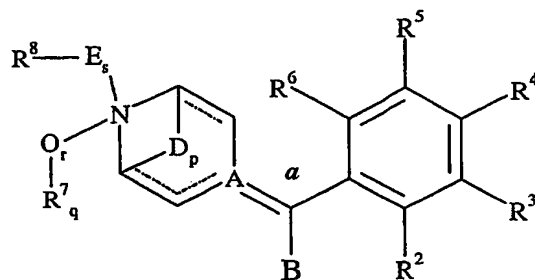
R², R³, R⁴, R⁵, and R⁶ are independently selected from hydrogen, halogen, alkyl, haloalkyl, hydroxyl, alkoxy, haloalkoxy, pentahalothio, alkylthio, cyano, nitro, alkylcarbonyl, alkoxy carbonyl, aryl, or aryloxy, provided that at least one of R², R³, R⁴, R⁵, and R⁶ are other than hydrogen; and either of R² and R³, or R³ and R⁴ may be taken together with -OCF₂O-, -OCF₂CF₂-, -CF₂CF₂O-, or -CH=CHCH=CH-, forming a benzo-fused ring;

and when,

(a) m and n are 0;

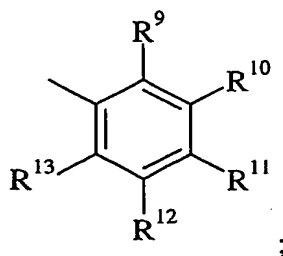
a double bond between methyl carbon (a) and the 4-position of the six-membered azine ring is formed,

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where

B is phenyl substituted with R^9 , R^{10} , R^{11} , R^{12} , and R^{13} ,



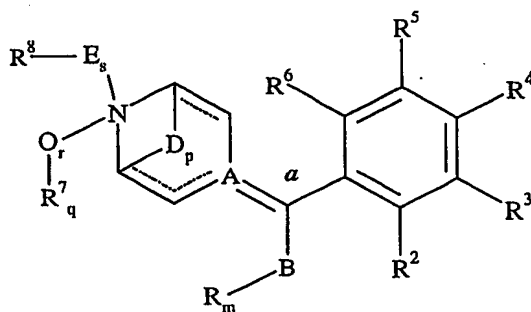
where

R^9 , R^{10} , R^{11} , R^{12} , and R^{13} are independently selected from hydrogen, halogen, alkyl, haloalkyl, hydroxyl, alkoxy, haloalkoxy, mercapto, and alkylthio, cyano, alkylcarbonyl, alkoxy carbonyl, or aryloxy; and, wherein either of R^9 and R^{10} , or R^{10} and R^{11} may be taken together with $-OCF_2O-$, $-OCF_2CF_2-$, or $-CF_2CF_2O-$, forming a benzo-fused ring, and;

and when

(b) m is 1, and n is 0;

a double bond between methyl carbon (a) and the 4-position of the six-membered azine ring is formed,



where

B is a bridging group from methyl carbon (a) to R;

where

B is selected from O, S, $^*\text{CH}_2\text{O}$, $^*\text{OCH}_2$, OC(=O)O , $^*\text{OC(=O)NR}^{15}$, $^*\text{NR}^{15}\text{C(=O)O}$, $^*\text{OC(=S)NR}^{15}$, $^*\text{NR}^{15}\text{C(=S)O}$, $^*\text{OCH}_2\text{C(=O)NR}^{15}$, $^*\text{NR}^{15}\text{C(=O)CH}_2\text{O}$, $^*\text{CH}_2\text{OC(=O)NR}^{15}$, $^*\text{NR}^{15}\text{C(=O)OCH}_2$, $^*\text{NR}^{15}\text{CH}_2$, $^*\text{CH}_2\text{NR}^{15}$, $^*\text{NR}^{15}\text{C(=O)}$, $^*\text{C(=O)NR}^{15}$, $^*\text{NR}^{15}\text{SO}_2$, $^*\text{SO}_2\text{NR}^{15}$, $^*\text{NR}^{15}\text{NHSO}_2$, $^*\text{SO}_2\text{NHN}^{15}$, $^*\text{OC(=O)NR}^{15}\text{SO}_2$, $^*\text{SO}_2\text{NR}^{15}\text{C(=O)O}$, $^*\text{OC(=O)NR}^{15}\text{CHR}^{16}$, $^*\text{CHR}^{16}\text{NR}^{15}\text{C(=O)O}$, $^*\text{NR}^{15}\text{C(=O)NR}^{16}$; 1,4-dioxycyclohexyl, or 4-oxypiperidin-1-yl, where the asterisk denotes attachment to the methyl carbon (a);

where

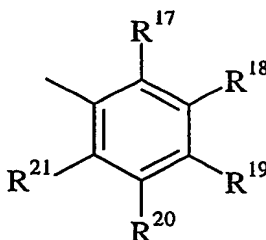
R^{15} and R^{16} are independently selected from hydrogen, alkyl, alkylaminocarbonyl, and arylcarbonyl wherein the aryl is optionally substituted with halogen, alkyl, alkoxy, haloalkyl, haloalkoxy, or nitro;

where

R is alkyl, cycloalkyl, alkenyl, or alkoxycarbonyl;

or

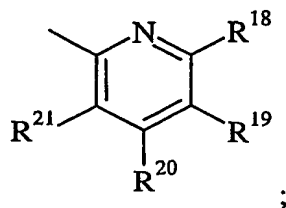
R is phenyl substituted with R^{17} , R^{18} , R^{19} , R^{20} , and R^{21} ;



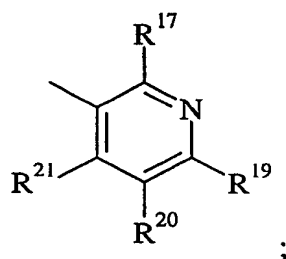
or,

R is pyrid-2-yl substituted with R^{18} , R^{19} , R^{20} , and R^{21} ,

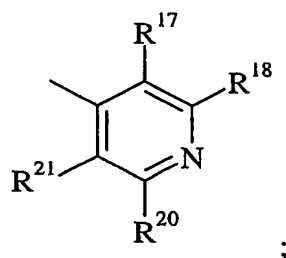
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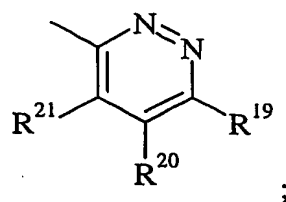
or

pyrid-3-yl substituted with R¹⁷, R¹⁹, R²⁰, and R²¹,

or

pyrid-4-yl substituted with R¹⁷, R¹⁸, R²⁰, and R²¹,

or

pyridazin-3-yl substituted with R¹⁹, R²⁰ and R²¹,

where

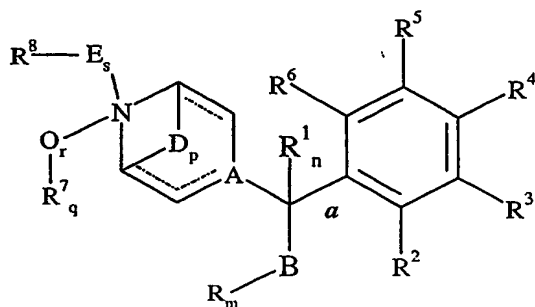
R¹⁷, R¹⁸, R¹⁹, R²⁰, and R²¹ are independently selected from hydrogen, halogen, alkyl, haloalkyl, alkoxy, haloalkoxy, alkylthio, haloalkylthio, cyano, nitro,

alkylcarbonyl, alkoxy carbonyl, alkoxy carbonylamino, aryl, aryloxy, and 2-alkyl-2H-tetrazole, and, wherein either of R^{17} and R^{18} , or R^{18} and R^{19} may be taken together with $-\text{CH}_2\text{CH}=\text{CHCH}_2-$, $-\text{OCF}_2\text{O}-$, $-\text{OCF}_2\text{CF}_2-$, or $-\text{CF}_2\text{CF}_2\text{O}-$, to form a benzo-fused ring;

and when

(c) m and n are 1;

a single bond between methyl carbon (a) and the 4-position of the six-membered azine ring is formed;



where

B is a bridging group from methyl carbon (a) to R;

where

B is selected from O, S, $^*\text{CH}_2\text{O}$, $^*\text{OCH}_2$, $\text{OC}(=\text{O})\text{O}$, $^*\text{OC}(=\text{O})\text{NR}^{15}$, $^*\text{NR}^{15}\text{C}(=\text{O})\text{O}$, $^*\text{OC}(=\text{S})\text{NR}^{15}$, $^*\text{NR}^{15}\text{C}(=\text{S})\text{O}$, $^*\text{OCH}_2\text{C}(=\text{O})\text{NR}^{15}$, $^*\text{NR}^{15}\text{C}(=\text{O})\text{CH}_2\text{O}$, $^*\text{CH}_2\text{OC}(=\text{O})\text{NR}^{15}$, $^*\text{NR}^{15}\text{C}(=\text{O})\text{OCH}_2$, $^*\text{NR}^{15}\text{CH}_2$, $^*\text{CH}_2\text{NR}^{15}$, $^*\text{NR}^{15}\text{C}(=\text{O})$, $^*\text{C}(=\text{O})\text{NR}^{15}$, $^*\text{NR}^{15}\text{SO}_2$, $^*\text{SO}_2\text{NR}^{15}$, $^*\text{NR}^{15}\text{NHSO}_2$, $^*\text{SO}_2\text{NHN}^{15}$, $^*\text{OC}(=\text{O})\text{NR}^{15}\text{SO}_2$, $^*\text{SO}_2\text{NR}^{15}\text{C}(=\text{O})\text{O}$, $^*\text{OC}(=\text{O})\text{NR}^{15}\text{CHR}^{16}$, $^*\text{CHR}^{16}\text{NR}^{15}\text{C}(=\text{O})\text{O}$, $^*\text{NR}^{15}\text{C}(=\text{O})\text{NR}^{16}$; 1,4-dioxycyclohexyl, or 4-oxypiperidin-1-yl, where the asterisk denotes attachment to the methyl carbon (a); where R^{15} and R^{16} are described above;

and,

R is alkyl, cycloalkyl, alkenyl, or alkoxy carbonyl;

or

R is phenyl substituted with R^{17} , R^{18} , R^{19} , R^{20} , and R^{21} ; pyrid-2-yl substituted with R^{18} , R^{19} , R^{20} , and R^{21} ; pyrid-3-yl substituted with R^{17} , R^{19} , R^{20} , and R^{21} ; pyrid-4-yl substituted with R^{17} , R^{18} , R^{20} , and R^{21} ; or pyridazin-3-yl substituted with R^{19} , R^{20} and R^{21} ; where R^{17} , R^{18} , R^{19} , R^{20} , and R^{21} are described above;

R^1 is selected from hydrogen, alkyl, alkoxyalkyl, or aryl;

when p is 1, 2, or 3;

D is $-CH_2-$, and an azabicyclo derivative of the six-membered azine ring is formed;

when q is 0, and r is 1, an N-oxide derivative of the six-membered azine ring nitrogen is formed;

when q is 1 and r is 0 or 1;

R^7 is selected from alkyl, haloalkyl, hydroxyalkyl, alkoxyalkyl, dialkylaminoalkyl, alkylaminocarbonyloxyalkyl, alkylthioalkyl, alkylsulfonylalkyl, alkylcarbonyloxyalkyl, alkoxycarbonylalkyl, carboxyalkyl, arylalkyl, arylcarbonyl, sulfonato, or sulfonatoalkyl, and may bear a negative charge resulting in an inner salt; and a separate ion is chloride, bromide, iodide, or an alkyl or phenyl sulfate or sulfonate;

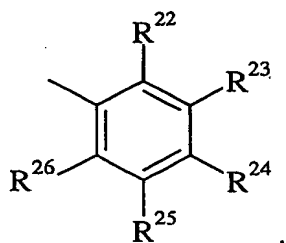
when s is 0 or 1;

R^8 is selected from hydrogen, alkyl, cycloalkyl, cycloalkylalkyl, alkoxy, alkoxyalkyl, amino, morpholinyl, optionally substituted indolyl, piperidinyl, optionally substituted (pyridyl)alkenyl, optionally substituted 1,2,3,4-tetrahydronaphthylenyl, optionally substituted arylpyrazolyl, benzo[b]thiophenyl, 5-hydropyridino[1,2a]pyrimidinonyl, optionally substituted 4-hydro-1,3-thiazolino[3,2a]pyrimidinonyl, 1,2,3,4-tetrahydroquinolinyl, 2-thioxo-1,3-dihydroquinazolinonyl, 1,3-

dihydroquinazolindionyl, or benzo[c]azolindionyl, wherein the optional substituent is selected from halogen, alkyl, alkoxy, and nitro;

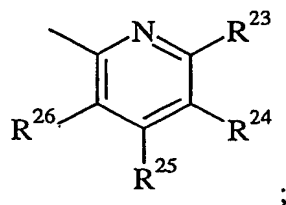
or

R⁸ is phenyl substituted with R²², R²³, R²⁴, R²⁵, and R²⁶,



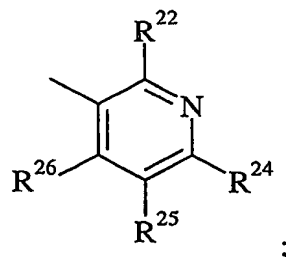
or

pyrid-2-yl substituted with R²³, R²⁴, R²⁵, and R²⁶,



or

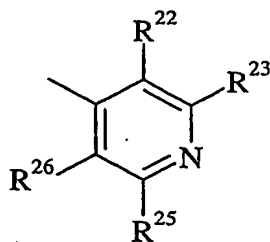
pyrid-3-yl substituted with R²², R²⁴, R²⁵, and R²⁶,



or

pyrid-4-yl substituted with R²², R²³, R²⁵, and R²⁶,

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where

R^{22} , R^{23} , R^{24} , R^{25} , and R^{26} are independently selected from hydrogen, halogen, alkyl, hydroxy, alkoxy, alkoxyalkyl, dialkoxyalkyl, trialkoxyalkyl, alkoxyiminoalkyl, alkenyloxyiminoalkyl, alkynyloxyiminoalkyl, cycloalkylalkoxy, alkoxyalkoxy, alkylthio, dithioalkoxyalkyl, trithioalkoxyalkyl, alkylsulfonyl, alkylaminosulfonyl, dialkylaminosulfonyl, cycloalkylaminosulfonyl, alkenyloxy, alkynyloxy, haloalkenyloxy, alkylsulfonyloxy, optionally substituted arylalkoxy, cyano, nitro, amino, alkylamino, alkylcarbonylamino, alkoxycarbonylamino, alkenyloxycarbonylamino, alkynyloxycarbonylamino, haloalkylcarbonylamino, alkoxyalkoxycarbonylamino, (alkyl)(alkoxycarbonyl)amino, alkylsulfonylamino, optionally substituted (heteroaryl)(alkoxycarbonyl)amino, optionally substituted arylcarbonylamino, formyl, optionally substituted 1,3-dioxolan-2-yl, optionally substituted 1,3-dioxan-2-yl, optionally substituted 1,3-oxazolidin-2-yl, optionally substituted 1,3-oxazaperhydroin-2-yl, optionally substituted 1,3-dithiolan-2-yl, optionally substituted 1,3-dithian-2-yl, alkoxycarbonyl, alkylaminocarbonyloxy, alkylaminocarbonylamino, dialkylaminocarbonylamino, alkylamino(thiocarbonyl)amino, dialkylphosphoroureydyl, optionally substituted thienyl, optionally substituted 1,3-thiazolylalkoxy, optionally substituted aryl, optionally substituted aryloxy, optionally substituted aryloxyalkyl, optionally substituted arylaminocarbonyloxy, optionally substituted heteroaryl, optionally substituted heteroaryloxy, optionally substituted pyrrolyl, optionally substituted pyrazolyl, optionally substituted pyrazinyloxy, optionally substituted 1,3-oxazolinyl, optionally substituted 1,3-oxazolinylloxy, optionally substituted 1,3-oxazolinylamino, optionally

substituted 1,2,4-triazolyl, optionally substituted 1,2,3-thiadiazolyl, optionally substituted 1,2,5-thiadiazolyl, optionally substituted 1,2,5-thiadiazolyloxy, optionally substituted 2H-tetrazolyl, optionally substituted pyridyl, optionally substituted pyridyloxy, optionally substituted pyridylamino, optionally substituted pyrimidinyl, optionally substituted pyrimidinylloxy, optionally substituted 3,4,5,6-tetrahydropyrimidinylloxy, optionally substituted pyridazinyloxy, or optionally substituted 1,2,3,4-tetrahydronaphthalenyl, wherein the optional substituent is selected from one or more of halogen, alkyl, haloalkyl, alkoxy, dialkoxyalkyl, dithioalkoxyalkyl, cyano, nitro, amino, or alkoxycarbonylamino, provided that at least one of R^{22} , R^{23} , R^{24} , R^{25} , and R^{26} is other than hydrogen;

when s is 1;

E is a bridging group selected from $(CR^{27}R^{28})_x-(CR^{29}R^{30})_y$, $(CR^{27}R^{28})_x-(CR^{29}R^{30})_yO^*$, C_3H_6 , C_4H_8 , $C(=O)$, $C(=O)C_2H_4^*$, $C_2H_4C(=O)^*$, $C_3H_6C(=O)^*$, $C_4H_8NHC(=O)^*$, or $C(=S)NH^*$, where the asterisk denotes attachment at R^8 ,

where

x is 1; y is 0, or 1;

and,

where R^{27} , R^{28} , R^{29} , and R^{30} are independently selected from hydrogen, alkyl, and aryl optionally substituted with alkoxy;

N-oxides;

and

agriculturally-acceptable salts thereof.

Claim 2. A compound of claim 1, wherein p and q are 0; r is 0 or 1; and s is 1; R^2 , R^3 , R^4 , R^5 , and R^6 are independently selected from hydrogen, halogen, alkyl, haloalkyl, hydroxyl, alkoxy, haloalkoxy, pentahalothio, alkylthio, nitro, aryl, and aryloxy; E is the bridging group $-(CR^{27}R^{28})_x-(CR^{29}R^{30})_y-$, where x is 1 and y is 0, R^{27} and R^{28} are hydrogen; and R^8 is phenyl substituted with R^{22} , R^{23} , R^{24} , R^{25} , and R^{26} , where R^{22} , R^{23} , R^{24} , R^{25} , and R^{26} are independently selected from hydrogen, alkoxy, dialkoxyalkyl, dithioalkoxyalkyl, alkoxyiminoalkyl,

alkenyloxyiminoalkyl, alkynyloxyiminoalkyl, alkoxycarbonylamino, optionally substituted arylcarbonylamino, alkoxycarbonyl, alkylaminocarbonyloxy, optionally substituted 1,3-dioxolane-2-yl, optionally substituted 1,3-dioxan-2-yl, optionally substituted 1,3-dithiolan-2-yl, optionally substituted 1,3-dithian-2-yl, optionally substituted aryl, optionally substituted aryloxy, optionally substituted 2H-tetrazole, optionally substituted pyridyl, optionally substituted pyridyloxy, optionally substituted pyrimidinyl, optionally substituted pyrimidyloxy, and optionally substituted pyridazinyloxy.

Claim 3. A compound of claim 2, wherein A is C, forming said piperidine ring; m is (a) 0 or (b) 1, and n is 0, forming a double bond between methyl carbon (a) and the 4-position of said piperidine ring; and when

(a) m and n are 0;

B is phenyl substituted with R^9 , R^{10} , R^{11} , R^{12} , and R^{13} , where R^9 , R^{10} , R^{11} , R^{12} , and R^{13} are independently selected from hydrogen, halogen, alkyl, haloalkyl, hydroxyl, haloalkoxy, mercapto, and alkylthio;

or

when

(b) m is 1, and n is 0;

B is said bridging group selected from O, $*OC(=O)NR^{15}$, and $*SO_2NR^{15}$, where R^{15} is hydrogen;

and,

R is phenyl substituted with R^{17} , R^{18} , R^{19} , R^{20} , and R^{21} where R^{17} , R^{18} , R^{19} , R^{20} , and R^{21} are independently selected from hydrogen, halogen, alkyl, haloalkyl, alkoxy, haloalkoxy, nitro, aryl, aryloxy, and 2-alkyl-2H-tetrazole.

Claim 4. A compound of claim 3, wherein R^2 , R^3 , R^4 , R^5 , and R^6 are independently selected from hydrogen, halogen, haloalkyl, and haloalkoxy; and R^{22} , R^{23} , R^{24} , R^{25} , and R^{26} are independently selected from hydrogen, dialkoxyalkyl, dithioalkoxyalkyl, alkoxyiminoalkyl, alkylaminocarbonyloxy,

optionally substituted 1,3-dioxolan-2-yl, optionally substituted 1,3-dioxan-2-yl, optionally substituted aryloxy, optionally substituted 2H-tetrazole, optionally substituted pyridyloxy, optionally substituted pyrimidinyl, optionally substituted pyrimidinyl, and optionally substituted pyridazinyloxy.

Claim 5. A compound of claim 4, wherein (a) m and n are 0; and R^9 , R^{10} , R^{11} , R^{12} , and R^{13} are independently selected from hydrogen, halogen, haloalkyl, and haloalkoxy.

Claim 6. A compound of claim 5, wherein R^2 , R^3 , R^5 , R^6 , R^9 , R^{10} , R^{12} , R^{13} , R^{22} , R^{23} , R^{25} , and R^{26} are hydrogen; R^4 and R^{11} are difluoromethyl, trifluoromethyl or trifluoromethoxy; and R^{24} is pyrid-2-yloxy or pyrimidin-2-yloxy.

Claim 7. A compound of claim 4, wherein (b) m is 1, and n is 0; B is the bridging group O or $*OC(=O)NR^{15}$; and R^{17} , R^{18} , R^{19} , R^{20} , and R^{21} are independently selected from hydrogen, halogen, haloalkyl, and haloalkoxy.

Claim 8. A compound of claim 7, wherein R^2 , R^3 , R^5 , R^6 , R^{17} , R^{18} , R^{20} , R^{21} , R^{22} , R^{23} , R^{25} , and R^{26} are hydrogen; R^4 and R^{19} are difluoromethyl, trifluoromethyl or trifluoromethoxy; and R^{24} is pyrid-2-yloxy or pyrimidin-2-yloxy.

Claim 9. A compound of claim 2, wherein A is CH, forming said piperidine ring;

(c) m and n are 1, forming a single bond between methyl carbon (a) and the 4-position of said rings ;

R^1 is hydrogen;

B is said bridging group selected from O, $*OC(=O)NR^{15}$, and $*SO_2NR^{15}$, where R^{15} is hydrogen;

and

R is phenyl substituted with R^{17} , R^{18} , R^{19} , R^{20} , and R^{21} where R^{17} , R^{18} , R^{19} , R^{20} , and R^{21} are independently selected from hydrogen, halogen, alkyl, haloalkyl, alkoxy, haloalkoxy, nitro, aryl, aryloxy, and 2-alkyl-2H-tetrazole.

Claim 10. A compound of claim 9, wherein R^2 , R^3 , R^4 , R^5 , and R^6 are independently selected from hydrogen, halogen, haloalkyl, and haloalkoxy; and R^{22} , R^{23} , R^{24} , R^{25} , and R^{26} are independently selected from hydrogen, dialkoxyalkyl, dithioalkoxyalkyl, alkoxyiminoalkyl, alkylaminocarbonyloxy, optionally substituted 1,3-dioxolan-2-yl, optionally substituted 1,3-dioxan-2-yl, optionally substituted aryloxy, optionally substituted 2H-tetrazole, optionally substituted pyridyloxy, optionally substituted pyrimidinyl, optionally substituted pyrimidinyl, and optionally substituted pyridazinyl.

Claim 11. A compound of claim 10, wherein B is the bridging group O or $*OC(=O)NR^{15}$; R^{17} , R^{18} , R^{19} , R^{20} , and R^{21} are independently selected from hydrogen, halogen, haloalkyl, and haloalkoxy.

Claim 12. A compound of claim 11, wherein R^2 , R^3 , R^5 , R^6 , R^{17} , R^{18} , R^{20} , R^{21} , R^{22} , R^{23} , R^{25} , and R^{26} are hydrogen; R^4 and R^{19} are difluoromethyl, trifluoromethyl or trifluoromethoxy; and R^{24} is pyrid-2-yloxy or pyrimidin-2-yloxy.

Claim 13. A composition containing an insecticidally effective amount of a compound of claim 1 in admixture with at least one agriculturally acceptable extender or adjuvant.

Claim 14. A composition containing an insecticidally effective amount of a compound of claim 2 in admixture with at least one agriculturally acceptable extender or adjuvant.

Claim 15. A composition containing an insecticidally effective amount of a compound of claim 3 in admixture with at least one agriculturally acceptable extender or adjuvant.

Claim 16. A composition containing an insecticidally effective amount of a compound of claim 4 in admixture with at least one agriculturally acceptable extender or adjuvant.

Claim 17. A composition containing an insecticidally effective amount of a compound of claim 5 in admixture with at least one agriculturally acceptable extender or adjuvant.

Claim 18. A composition containing an insecticidally effective amount of a compound of claim 6 in admixture with at least one agriculturally acceptable extender or adjuvant.

Claim 19. A composition containing an insecticidally effective amount of a compound of claim 7 in admixture with at least one agriculturally acceptable extender or adjuvant.

Claim 20. A composition containing an insecticidally effective amount of a compound of claim 8 in admixture with at least one agriculturally acceptable extender or adjuvant.

Claim 21. A composition containing an insecticidally effective amount of a compound of claim 9 in admixture with at least one agriculturally acceptable extender or adjuvant.

Claim 22. A composition containing an insecticidally effective amount of a compound of claim 10 in admixture with at least one agriculturally acceptable extender or adjuvant.

- Claim 23. A composition containing an insecticidally effective amount of a compound of claim 11 in admixture with at least one agriculturally acceptable extender or adjuvant.
- Claim 24. A composition containing an insecticidally effective amount of a compound of claim 12 in admixture with at least one agriculturally acceptable extender or adjuvant.
- Claim 25. The insecticidal composition of claim 13, further comprising one or more second compounds.
- Claim 26. The insecticidal composition of claim 14, further comprising one or more second compounds.
- Claim 27. The insecticidal composition of claim 15, further comprising one or more second compounds.
- Claim 28. The insecticidal composition of claim 16, further comprising one or more second compounds.
- Claim 29. The insecticidal composition of claim 17, further comprising one or more second compounds.
- Claim 30. The insecticidal composition of claim 18, further comprising one or more second compounds.
- Claim 31. The insecticidal composition of claim 19, further comprising one or more second compounds.
- Claim 32. The insecticidal composition of claim 20, further comprising one or more second compounds.

Claim 33. The insecticidal composition of claim 21, further comprising one or more second compounds.

Claim 34. The insecticidal composition of claim 22, further comprising one or more second compounds.

Claim 35. The insecticidal composition of claim 23, further comprising one or more second compounds.

Claim 36. The insecticidal composition of claim 24, further comprising one or more second compounds.

Claim 37. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 13 to a locus where insects are present or are expected to be present.

Claim 38. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 14 to a locus where insects are present or are expected to be present.

Claim 39. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 15 to a locus where insects are present or are expected to be present.

Claim 40. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 16 to a locus where insects are present or are expected to be present.

Claim 41. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 17 to a locus where insects are present or are expected to be present.

Claim 42. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 18 to a locus where insects are present or are expected to be present.

Claim 43. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 19 to a locus where insects are present or are expected to be present.

Claim 44. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 20 to a locus where insects are present or are expected to be present.

Claim 45. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 21 to a locus where insects are present or are expected to be present.

Claim 46. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 22 to a locus where insects are present or are expected to be present.

Claim 47. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 23 to a locus where insects are present or are expected to be present.

Claim 48. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 24 to a locus where insects are present or are expected to be present.

Claim 49. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 25 to a locus where insects are present or are expected to be present.

Claim 50. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 26 to a locus where insects are present or are expected to be present.

Claim 51. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 27 to a locus where insects are present or are expected to be present.

Claim 52. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 28 to a locus where insects are present or are expected to be present.

Claim 53. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 29 to a locus where insects are present or are expected to be present.

Claim 54. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 30 to a locus where insects are present or are expected to be present.

Claim 55. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 31 to a locus where insects are present or are expected to be present.

Claim 56. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 32 to a locus where insects are present or are expected to be present.

Claim 57. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 33 to a locus where insects are present or are expected to be present.

Claim 58. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 34 to a locus where insects are present or are expected to be present.

Claim 59. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 35 to a locus where insects are present or are expected to be present.

Claim 60. A method of controlling insects, comprising applying an insecticidally effective amount of a composition of claim 36 to a locus where insects are present or are expected to be present.